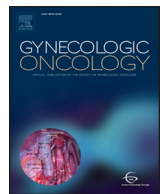




Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Clinical Practice Statement

Promoting health equity in the era of COVID-19[☆]

John H. Farley^a, Jeffrey Hines^b, Nita K. Lee^c, Sandra E. Brooks^d, Navya Nair^e, Carol L. Brown^f, Kemi M. Doll^g, Ellen J. Sullivan^h, Eloise Chapman-Davis^{i,*}

^a St. Joseph's Hospital and Medical Center Phoenix, AZ, United States of America

^b Wellstar Health System, Marietta, GA, United States of America

^c University of Chicago School of Medicine, Chicago, IL, United States of America

^d Thomas Jefferson University Hospitals, Philadelphia, PA, United States of America

^e Louisiana State University, New Orleans, LA, United States of America

^f Memorial Sloan Kettering Cancer Center, New York, NY, United States of America

^g University of Washington, Seattle, WA, United States of America

^h Society of Gynecologic Oncology, Foundation for Women's Cancer, Chicago, IL, United States of America

ⁱ Weill Cornell School of Medicine, New York, NY, United States of America

1. The importance of health equity

Across the United States, it is now apparent that the COVID-19 virus is exacerbating existing societal biases and longstanding inequities in health care, resulting in an excess of morbidity and mortality in underserved populations. The Society of Gynecologic Oncology (SGO) is committed to eliminating disparities, and increasing awareness of the critical issues that contribute to the differential outcomes experienced by gynecologic oncology patients. Health equity, defined as fairness and justice, exists only when people have an equal opportunity to be healthy. Health inequity, therefore, is the unfair and avoidable difference in health status seen within and between countries [1]. When defined structures or systems limit a person's ability to be healthy, inequities emerge. It is our goal to make gynecologic cancer patients, their caregivers and providers, aware of the issues that have been revealed, and amplified during the current global health crisis.

2. Social determinants of health

The World Health Organization defines social determinants of health (SDOH) as conditions “in which people are born, grow, live, work and age and the systems put in place to deal with illness” [1]. Unequal SDOH create and sustain most health inequities. Our patients' reality is that their health is directly linked to SDOH including, housing, violence, transportation, food access, neighborhood and community economics [2].

[☆] On behalf of the Society of Gynecologic Oncology. This SGO Clinical Practice Statement has been reviewed and approved by the SGO Clinical Practice Committee, Publication Committee and Board of Directors. This SGO Clinical Practice Statement was not peer-reviewed by Gynecologic Oncology.

* Corresponding author at: Department of Obstetrics and Gynecology, Division of Gynecologic Oncology, Weill Cornell School of Medicine, 525 East 68th Street, Suite J-130, New York, NY 10065, United States of America.

E-mail address: elc9120@med.cornell.edu (E. Chapman-Davis).

The current pandemic will impose an additional burden on vulnerable populations that already face barriers predisposing them to worse health outcomes. Preexisting comorbid conditions, economic insecurity, living environment, over representation in lower wage jobs or those requiring contact resulting in a higher risk for COVID-19 exposure, are all factors that adversely influence health outcomes during this pandemic (Fig. 1). As providers for women from diverse socio-economic, geographic, and racial/ethnic backgrounds, we see first-hand how SDOH adversely affect cancer care and delivery [3].

3. Implicit bias

Implicit bias is the stereotypes, attitudes, beliefs, judgments, prejudices that affect our thinking and behaviors in ways that we do not realize. Implicit biases are an integral part of our news and media platforms, influence our conversations and impact our healthcare and education systems (Fig. 2). These biases, which encompass both favorable and unfavorable assessments, are activated involuntarily and without an individual's awareness or intentional control [4]. We bring these unconscious biases to all our interactions including patient care and management decisions. When implicit biases are not addressed, they affect working relationships, trust, work productivity, and healthcare outcomes [5].

In the healthcare setting, we must address unconscious bias at the individual provider, institutional, and national policy levels in order to promote fair treatment of our patients. A few studies have begun to address biases, both implicit and explicit, of patients towards providers [6]. Acknowledging bias is the first step towards reducing our reliance on generalizations or stereotypes. In a study of African-American cancer patients, providers scoring high on implicit bias tests were viewed as less supportive and spent less time with their patients than providers with low scores. These patients had more difficulty remembering what their physicians told them, less confidence in their treatment plans, and found it more difficult to follow recommended treatments [7]. Implicit biases worsen in times of stress [8]. During this high stress

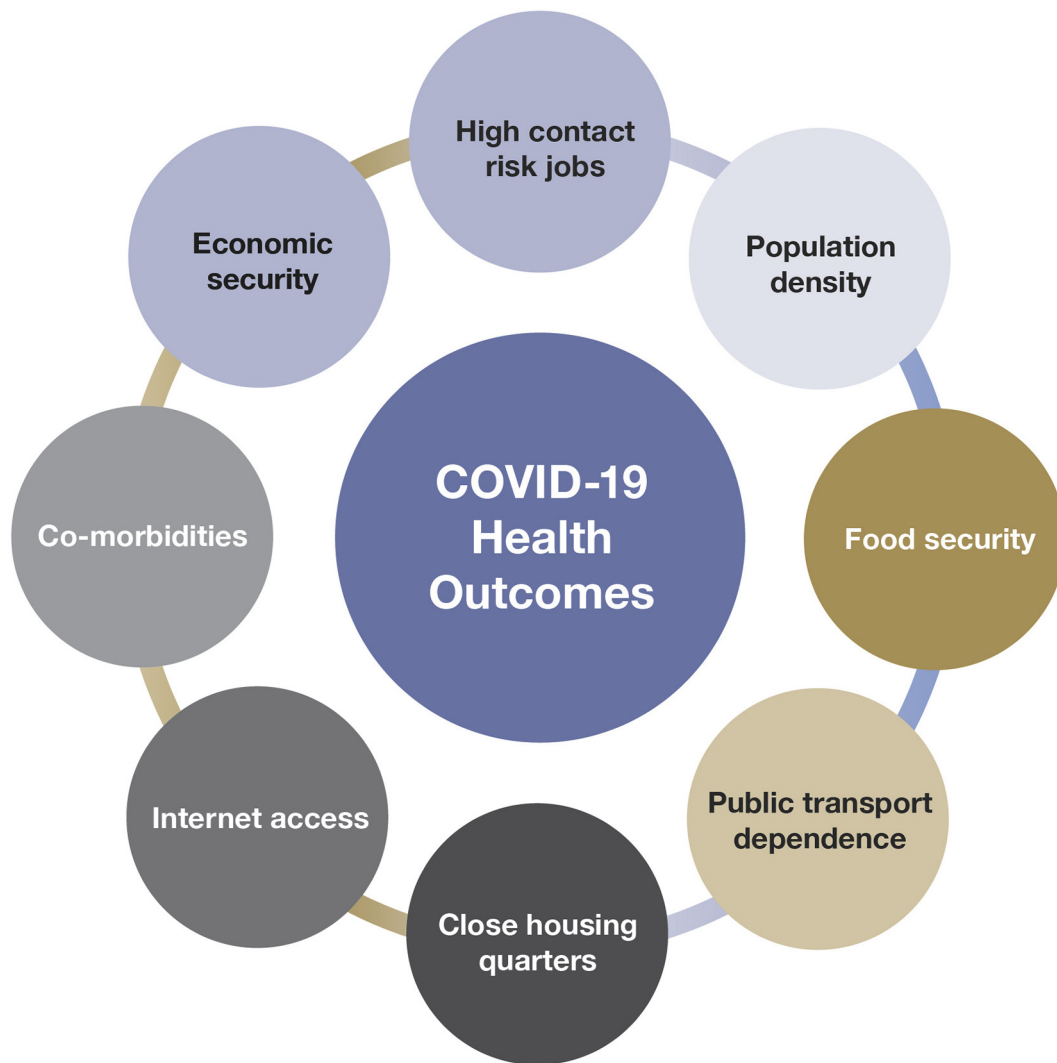


Fig. 1. Influencers of COVID-19 related health outcomes in marginalized populations.

COVID-19 environment, implicit bias may be amplified, affecting health outcomes among many of our patients.

4. COVID-19 and health care disparities

Emerging data suggests that the COVID-19 pandemic has disproportionately affected many minority populations in the United States (US) (Fig. 3). For health care disparities experts and those caring for vulnerable populations, this is not surprising [9]. While news of the pandemic from other countries focused solely on old age, gender, and comorbid condition, reporting in the US has revealed the COVID-19 impact in our communities by race, ethnicity and socio-economic variables.

The trends in disparate infection rates, outcomes, and higher mortality have been reported across the country [10]. The lack of reporting race and ethnicity data affected the initial COVID-19 narrative. Data from ZIP Codes in many regions began to hint at other important disparities. In late March and early April, data from multiple communities began to emerge. On April 3, 2020, ProPublica reported, initial statistics in Milwaukee County, WI, 81% of the deaths from COVID-19 were among Black residents despite comprising only 26% of that county's population [11,12]. These death rates among Black residents in the county continue to be high, currently accounting for 50% of deaths from COVID-19 [13]. The Detroit News reported on April 2 that at least

40% of deaths attributed to COVID-19 in Michigan were Black residents, a percentage that far exceeds the proportion of African Americans in the Detroit region and state [11,14,15]. In addition, more recent reporting in Chelsea, MA, Chicago, IL, and San Francisco, CA, have revealed local hot spots of COVID-19 among Hispanic/Latino and immigrant communities [16,17].

Vulnerable populations including those in nursing facilities, prisons and the homeless have unique risks. Homeless populations are among the most vulnerable to infection with COVID-19. They disproportionately suffer from chronic illnesses including cancer, and “social distancing” is also nearly impossible among this population [18,19]. One model using pre-COVID-19 health data from Los Angeles and New York City assumes potential 40% infection rates among the homeless and estimates that 4.3% of the nationwide homeless population (~21,295) would require hospitalization [20]. COVID-19 challenges for homeless populations throughout the country have only worsened but are difficult to quantify. Shelters are full, closed, or fraught with COVID-19 transmission risk due to crowded conditions. Despite increased demand among those with unstable housing, common places to find safe shelter such as libraries, gyms, and fast food restaurants are also closed. [18,19]. Data from rural populations has been limited, but concern about health care system capacity has already demonstrated strain in cancer care delivery and will become increasingly relevant [21].

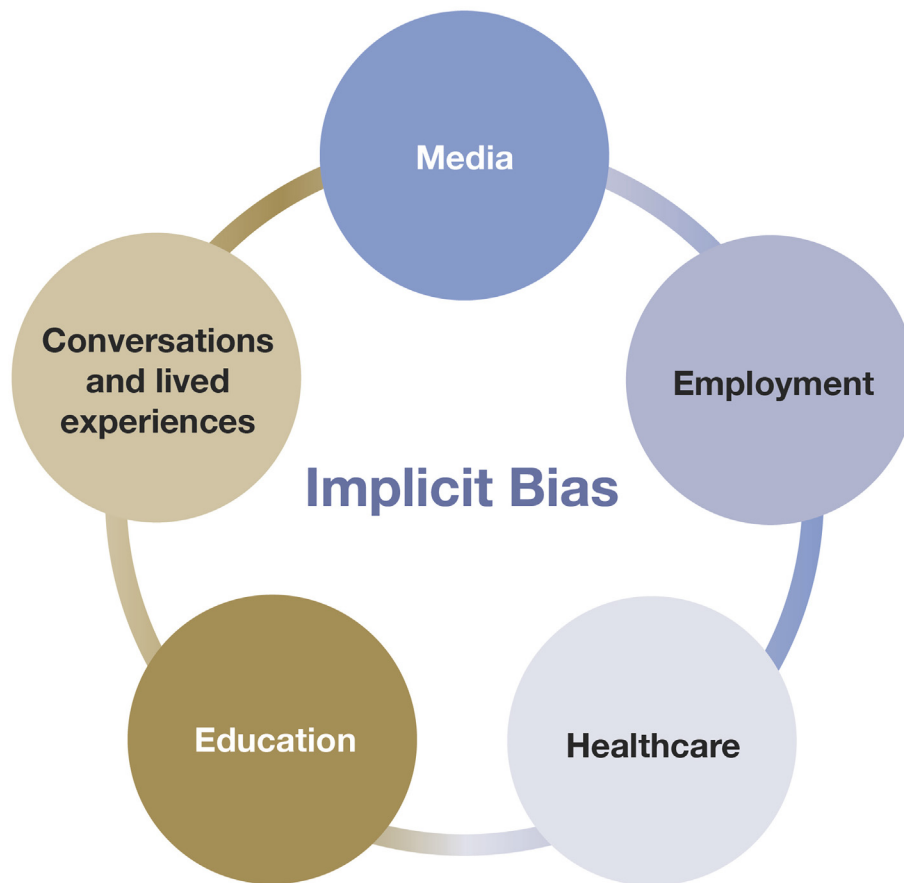


Fig. 2. Belief components that contribute to implicit bias.

5. Lessons on disparities from frontline regions

Granular statistics from the front lines of the COVID-19 pandemic in the US are even more concerning. As providers, we must learn from these data and act to protect our vulnerable patients and diverse communities in urban, rural and suburban settings. New York City (NYC)

emerged as one of the epicenters of the coronavirus outbreak, with the highest number of COVID-19 cases (138,435) and deaths (9944) nationwide as of April 21, 2020. Data regarding the racial breakdown of NYC COVID-19 demographic data was not initially available, but it was clear by ZIP Code that certain communities were harder hit [22]. As of April 3, 2020, the highest case counts by ZIP Codes ranged from 409 to

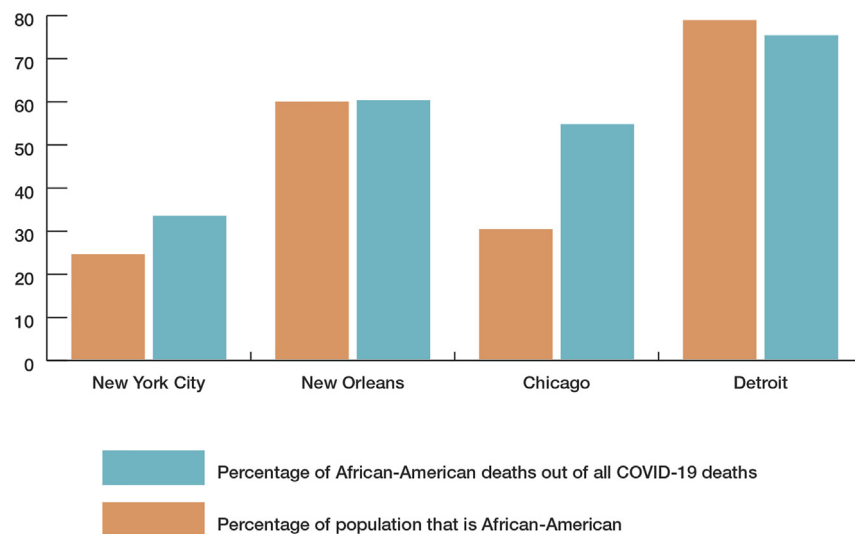


Fig. 3. Side-by-side comparison of the percentage of population made up by African-Americans to percentage of African-American COVID-19 deaths in cities heavily affected by the pandemic as of April 21, 2020. Data acquired from respective Department of Health websites and census data <https://detroitmi.gov/departments/detroit-health-department/programs-and-services/communicable-disease/coronavirus-covid-19> <http://ldh.la.gov/Coronavirus/> <https://www1.nyc.gov/assets/doh/downloads/pdf/imm/covid-19-deaths-race-ethnicity-04162020-1.pdf> <https://www.chicago.gov/city/en/sites/covid-19/home/latest-data.html> <https://www.census.gov/quickfacts/>

1245 cases and were concentrated in parts of Brooklyn, Queens and the Bronx, specifically in lower income communities of color although actual race data was not reported until April 8. [23]. As of April 24, 2020, racial disparities were confirmed by NYC COVID-19 mortality rates reported among both Hispanic/Latino (34%) and Black (28%) communities despite only representing 29% and 22% of the NYC population, respectively. Blacks and Hispanics/Latinos were more likely to die of COVID-19 than all other racial groups (Hispanic/Latino 55.3/100,000, Black 64.6/100,000, White 15.6/100,000, and Asian 33.1/100,000) [24]. In NYC, the concept of social distancing and lockdown for many immigrant and underserved communities is not feasible. Many continue to work and are considered “essential” health care workers, city employees and delivery personnel resulting in higher spread and later presentation to hospitals for treatment.

In Louisiana, as of April 21, 2020, there have been 24,854 cases of COVID-19 in all 64 parishes with 1405 deaths. Black patients comprise 56.25% of COVID-19 deaths in Louisiana while comprising only 32% of the state's population. Of the COVID-19 deaths in Louisiana, 56% had hypertension, 35% had diabetes, and 8% had cancer [25]. The overlap between these diseases traditionally linked to SDOH and now COVID related mortality is important to recognize.

Chicago first reported racial disparities related to COVID-19 on April 8, 2020 with African Americans representing 52% of those with positive tests and 70% of deaths, although only making up 29% of the population [26,27]. Most recent data from April 24, 2020, shows that in a city with 16,200 cases, 43% of cases were in Black residents and 28.5% were in Hispanic/Latino residents. Death rates per 100,000 also show striking differences among racial groups (Black 49.7, Asian 20, Hispanic/Latino 17, White 13.7) [28]. The importance of reporting race and ethnicity in COVID-19 data is clear. Similar racial disparities in COVID-19 cases and deaths are now being reported throughout the country.

6. Complexity of COVID-19-related health care disparities

Blame for disparities in outcomes from COVID-19 is often shifted to comorbid conditions that are now identified as risk factors including hypertension, asthma, diabetes and obesity. Increased mortality among people with comorbid illnesses is deemed inevitable and there is “nothing to be done.” In gynecologic oncology, we are familiar with how comorbid conditions, many of which are related to inequities in SDOH, can adversely affect cancer care irrespective of race/ethnicity. We must apply active management skills to consider how COVID-19 risks can be mitigated for patients instead of accepting these risks as inevitable.

While comorbidities are contributory, other structural concerns surrounding COVID-19 are also important. Although current data is lacking on specific demographics of testing, minority groups and marginalized communities may have had less access to initial testing. Health care providers' implicit racial bias could also influence their decision about who receives a diagnostic coronavirus test or triage. Public health and social media messaging about staying home if ill, coupled with longstanding disenfranchisement from health care access, may have resulted in treatment delays leading to worse outcomes [29,30]. In NYC, it became clear that the most vulnerable under-resourced safety-net hospitals serving the most affected communities were quickly overloaded. Factors such as resource allocation, geographic location, and public versus private hospital systems have influenced access to necessary supplies and COVID-19 testing. As a result, state legislation was rapidly implemented to better pool resources to address these disparities [22,23,31].

The US Department of State Coronavirus Task Force advises, “flattening the curve” through a variety of methods including social distancing. Steps to “flatten the curve” and “shelter in place” come with their own set of inherent racial and economic biases. We must understand that there is a stark difference in who has the “privilege” to stay at home [11]. Many white-collar workers have broadband internet and computers, which enable them to easily work from home, while many

from poorer neighborhoods do not have this luxury. Only 9.2% of workers in the lowest quartile of the wage distribution can telework, compared with 61.5% of workers in the highest quartile [11,32]. Social distancing is a privilege [11]. Those who cannot must make a grave choice between staying at home and risk lost wages or going to work and risk contagion.

Minorities also make up a higher percentage of low wage workers who are considered essential and cannot work from home [33]. A recent analysis forecasting COVID-19 effects on Black Americans, revealed that Blacks are overrepresented in all jobs that are considered essential, making up 15% of the entire essential workforce [33]. This includes front-line healthcare occupations, where Blacks make up at least one-third of nursing assistants, orderlies, and psychiatric aides [33]. In the health care sector, many low-wage jobs including environmental services, transport, and food services are positions held by Blacks, Hispanics/Latinos, and Asians. As health care providers for women, it is important to highlight that 1 in 3 women hold jobs defined as essential, with higher rates found among non-white women [34]. Poverty, lack of savings, and unstable housing increase vulnerability to COVID-19. Urban low-wage workers must often use crowded mass transportation and risk exposure. We must recognize and empathize with what it is like to be poor in the US: to live in a too-small space with too many people, to not have enough money to stockpile food for a long duration, and to live in a food desert. We must be acutely aware of the role these factors have on our patients and how it impacts their health decisions.

7. Bias towards Asian and Asian-American communities due to COVID-19 pandemic

Another critical consideration is how the COVID-19 pandemic has affected the diverse Asian and Asian-American communities throughout this country. A rise in the incidence of verbal, physical, and violent attacks against Asian Americans has been reported throughout the US. Promotion of hateful rhetoric like labeling SARS-COV-2 virus the “Chinese Virus” has resulted in increasing anti-Asian sentiments and bigotry [35]. Americans of Asian descent need to know they will be protected not just from COVID-19 but also from violence, harassment, and discrimination. The Asian-American community is not homogenous and includes many countries of origin including East Asia, Southeast Asia and South Asia. Many subsets of Asian communities also suffer from poverty and face the same health care disparities and SDOH as other minority groups, especially during the COVID-19 crisis.

Approximately 20% of the nation's front-line health care workers are immigrants, representing many countries of origin in Asia. In 2019, the Association of American Medical Colleges reported that 17% of doctors practicing in the United States were of Asian descent [36]. The virus of hate puts Asians and Asian-American members within our own gynecologic oncology community and the patients they serve in double jeopardy [37]. This cannot be tolerated. SGO—like many leading medical organizations including the American College of Surgeons—condemns such bias and bigotry and encourages reporting of any such incidences [38].

8. Patient-centered response to COVID-19: the importance of the patient's voice

The most accurate and salient information on patients' needs comes from patients themselves. In oncology, large and powerful advocacy groups that represent patient perspectives, fund research and set priorities for future knowledge. In clinical research, patient-reported outcome measures of toxicity are incorporated into clinical trial protocols [39], and in practice, use of patient-reported measures has a survival benefit [40]. Organizations focused on advocacy, cancer navigation, and support, have quickly mobilized to address the psychosocial, health, and financial needs at the national and local level, and through online and media presences. [39]. A gap remains among organizations specifically serving the marginalized populations in gynecologic oncology.

Groups focusing specifically on underserved communities, although limited, are trusted networks that are now mobilizing to address COVID-19 needs [40,41]. The Endometrial Cancer Action Network for African Americans (ECANA) is one organization that started in response to these gaps, and has taken one step in the journey to meaningful national engagement among marginalized communities in gynecological oncology [42].

ECANA members are experiencing first-hand the statistics reported in this paper including close contacts infected with COVID-19, the inability to socially isolate, and the need to continue working. Yet at the same time, demonstrating the power of the patient voice and community partnership, these women are promoting strong evidence-based public health messaging using both ECANA and personal social media platforms to limit the impact of the pandemic [42]. They communicated the importance of staying home, social distancing, strategies for self-care, and addressing the frustration, and anger of the racial disparities related to COVID-19. When pandemics such as COVID-19 occur, the marginalized populations will always be at highest risk. Without the power of immediate connection with community-based groups, we as clinicians risk a costly delay in recognizing, assessing, and intervening to mitigate their extra vulnerability. Moving forward we can invest and engage with marginalized communities to provide real-time information and actionable solutions to blunt the impact of structural bias in our healthcare system and society.

9. A call to action and the role of the gynecologic oncology provider

We conclude this statement with a call to action. SGO advocates for the continued support of all our patients and health care personnel

providing cancer care during this turbulent time. SGO and the American Society of Clinical Oncology (ASCO) have published guidelines about adapting oncology care during this pandemic [43,44]. These recommendations are made to safely care for patients; however, underserved populations face significant barriers to adhering to these guidelines. Creative solutions must be considered to address these barriers; however, identification and acknowledgment that they exist is the first step. These guidelines must be tailored to address the specific needs and resources of our patients and their communities (Fig. 4). Cancer care delivery should be performed without the specter of discrimination, racism, implicit or explicit bias, and should factor in the social determinants of health in order to identify focused solutions.

First, to be successful, organizations must acknowledge and know the historical context, cycles, systems, and structures that make minority and underserved communities at risk. Others who are marginalized include people from rural communities, the elderly, people with disabilities, women in prison, and members of the LGBTQ community. These groups also face exacerbated disparities in the COVID-19 era. Creating social capital by training and positioning community advocates and leaders in key positions is necessary to foster meaningful community shared governance to respond to this crisis and promote long-term health equity.

Second, we must continue to advocate for policy at the local, state and national levels that increases equitable health care access and quality. Despite the Affordable Care Act's original intent to expand coverage to nearly all Americans, about 3 million remain uninsured [45,46]. In the Medicaid non-expansion states, over half of low-income Americans who were uninsured in 2010 remain without access to affordable coverage. These Americans fall in the so-called

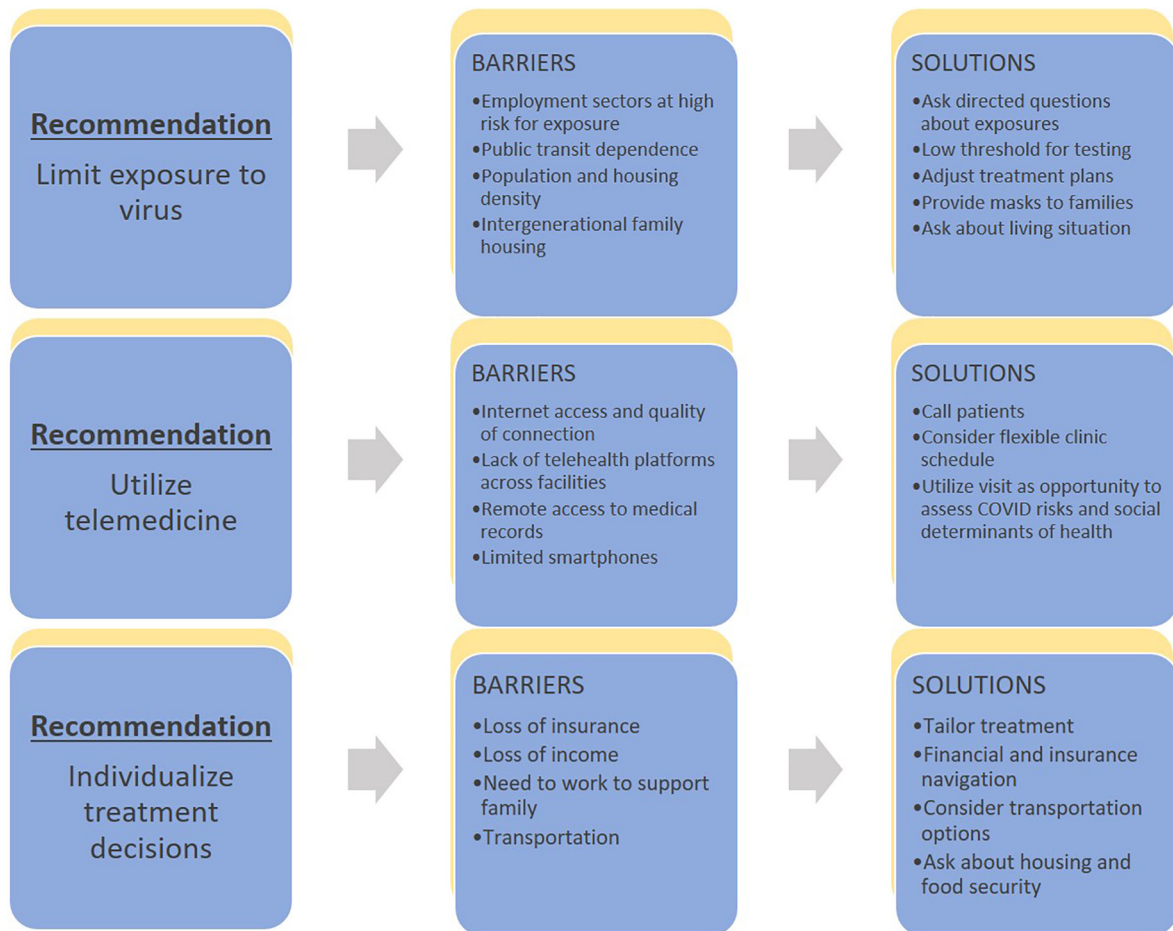


Fig. 4. Suggested solutions to barriers experienced by marginalized populations during the COVID-19 pandemic. *Recommendations based on American Society of Clinical Oncology and Society of Gynecologic Oncology [43,44].

coverage gap: they are not poor enough to qualify for traditional Medicaid, and yet do not earn enough to qualify for subsidies on the exchange. We must advocate for closing this loophole in coverage, which disproportionately affects underserved patients. This effort will be even more necessary as more cancer patients are left financially vulnerable, out of work and lacking insurance due to the COVID-19 crisis.

As gynecologic oncology practitioners, we should continue to have frank conversations with our patients with regards to COVID-19 symptoms as well as questions about changing financial concerns, safe home environments, access to care, food and housing. Being honest about our individual implicit biases (since we all have them) is critical. Self-evaluation of comfortable and less comfortable spaces/circumstances is important to overcome these biases [47]. We should collaborate with our medical colleagues to actively manage ongoing comorbid conditions for our patients as these may influence treatment options for cancer during the pandemic and worsen outcomes related to both. As cancer care providers, we see these circumstances daily and often help negotiate our patients through them towards the goal of equitable care.

We must continue to work with our colleagues in social work and advocacy organizations, many of which have quickly adapted to the crisis and are providing online resources for groups and individuals. This crisis should create new opportunities for collaborations with community organizations that can be integrated to better serve our patients now and in the future. Many patient advocates are well positioned to help lead these efforts. As our routine workflows have been altered, we must think outside of current care delivery models and be both bold and creative.

Finally, both individual physicians and health care systems must prioritize, ensuring cancer health equity and improving social determinants of health. Promoting economic stability, physical environment, education, and access to healthy food that affect our patients' ability to comply with public health recommendations and our recommended treatments, will influence their outcomes from both cancer and COVID-19. Meaningful community engagement at the level of the individual provider and our health care systems should be prioritized as we realize that we must collaborate to understand local needs and address them in sustainable ways. Institutional efforts and interventions can also be effective to address implicit bias. These efforts include conducting climate assessments, using evidence-based questionnaires, giving leaders feedback on that data, and providing ongoing training [48]. It is imperative to harness our energy to research and develop ways to diminish the heightened impact of glaring health care disparities and discrimination the pandemic has brought to the forefront. COVID-19 has exposed the tragic vulnerabilities of many of our patients and communities but has also revealed the depth of resiliency in providers, in community organizations, and in our cancer patients. Our experience addressing COVID-19 disparities in gynecologic cancer patients can translate to a more holistic dialogue about health equity, bringing all stakeholders to the discussion. We all experience a health benefit if the health outcomes of those at the margins improve.

Author contributions statement

John H. Farley: Conceptualization, writing original draft, review and editing. **Jeffrey Hines** Writing, original draft, review and editing. **Nita K. Lee** Investigation, writing original draft, review and editing. **Sandra E. Brooks:** Writing, writing original draft, review, editing, supervision. **Navya Nair:** Investigation, methodology, writing, original draft, review and editing. **Kemi M. Doll:** Writing original draft. **Carol L. Brown:** Conceptualization, writing, review and editing. **Ellen J. Sullivan:** Project administration, review and editing. **Eloise Chapman-Davis:** Conceptualization, investigation, data curation, writing original draft, visualization, review, editing, supervision.

Conflict of interest

Dr. Brooks reports no conflicts. Dr. Brown is the Associate Cancer Center Director for Diversity & Health Equity at Memorial Sloan Kettering Cancer Center and was Immediate Past-President of the Society of Gynecologic Oncology when the manuscript was being written. Dr. Chapman-Davis reports no conflicts. Dr. Doll reports no conflicts. Dr. Farley reports no conflicts. Dr. Hines reports no conflicts. Dr. Nair reports personal fees from Intellisphere, LLC DBA Targeted Healthcare Communications, outside the submitted work. Dr. Lee reports no conflicts. Ms. Sullivan reports no conflicts.

References

- [1] CSDH, Closing the gap in a generation: health equity through action on the social determinants of health, Final Report of the Commission on Social Determinants of Health, World Health Organization, Geneva, 2008.
- [2] K.I. Alcaraz, T.L. Wiedt, E.C. Daniels, K.R. Yabroff, C.E. Guerra, R.C. Wender, Understanding and addressing social determinants to advance cancer health equity in the United States: a blueprint for practice, research, and policy, *CA Cancer J. Clin.* 70 (1) (2020) 31–46, [Internet], Jan [cited 2020 Apr 25]. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.3322/caac.21586>.
- [3] Y. Collins, K. Holcomb, E. Chapman-Davis, D. Khabele, J.H. Farley, Gynecologic cancer disparities: a report from the Health Disparities Taskforce of the Society of Gynecologic Oncology, *Gynecol. Oncol.* 133 (2) (2014) 353–361, [Internet], May [cited 2020 Apr 25]. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S009082581400002X>.
- [4] A.G. Greenwald, M.R. Banaji, Implicit social cognition: attitudes, self-esteem, and stereotypes, *Psychol. Rev.* 102 (1) (1995) 4–27, [Internet], [cited 2020 Apr 25]. Available from: <http://doi.apa.org/getdoi.cfm?doi=10.1037/0033-295X.102.1.4>.
- [5] M. Chisolm-Straker, H. Straker, Implicit bias in US medicine: complex findings and incomplete conclusions, *Int. J. Hum. Rights Healthc.* 10 (1) (2017 Mar 13) 43–55, [Internet], [cited 2020 Apr 25]. Available from: <https://www.emerald.com/insight/content/doi/10.1108/IJHRH-11-2015-0038/full/html>.
- [6] E.E. Whitgob, R.L. Blankenburg, A.L. Bogetz, The discriminatory patient and family: strategies to address discrimination towards trainees, *Acad. Med. J. Assoc. Am. Med. Coll.* 91 (11) (2016) S64–S69 Association of American Medical Colleges Learn Serve Lead: Proceedings of the 55th Annual Research in Medical Education Sessions.
- [7] L.A. Penner, J.F. Dovidio, R. Gonzalez, T.L. Albrecht, R. Chapman, T. Foster, et al., The effects of oncologist implicit racial bias in racially discordant oncology interactions, *J. Clin. Oncol.* 34 (24) (2016 Aug 20) 2874–2880, [Internet], [cited 2020 Apr 25]. Available from: <http://ascopubs.org/doi/10.1200/JCO.2015.66.3658>.
- [8] T. DeAngelis, How does implicit bias by physicians affect patients' healthcare? *Monit. Psychol.* 50 (3) (2019 Mar) 22, [Internet], Available from: <https://www.apa.org/monitor/2019/03/ce-corner>.
- [9] I. Kendi, Why Don't We Know Who the Coronavirus Victims Are? The Atlantic [Internet], 2020 Apr 1, Available from: <https://www.theatlantic.com/ideas/archive/2020/04/stop-looking-away-race-covid-19-victims/609250/>.
- [10] T. Richman, Maryland hasn't released racial breakdown of coronavirus cases, despite pressure from black lawmakers, The Baltimore Sun [Internet], 2020 Apr 2, Available from: <https://www.baltimoresun.com/coronavirus/bs-md-pol-race-breakdown-coronavirus-20200402-tlpx4bxx7nd6hd3dv2bnis7x6m-story.html>.
- [11] C. Blow, Social distancing is a privilege, The New York Times: Opinion, [Internet], Available from: <https://www.nytimes.com/2020/04/05/opinion/coronavirus-social-distancing.html> 2020 Apr 5.
- [12] A. Johnson, T. Buford, Early data shows African Americans have contracted and died of coronavirus at an alarming rate, Available from: <https://www.propublica.org/article/early-data-shows-african-americans-have-contracted-and-died-of-coronavirus-at-an-alarming-rate> 2020 Apr 3.
- [13] Milwaukee County COVID-19 dashboard, [Internet], [cited 2020 May 4]. Available from: <https://county.milwaukee.gov/EN/COVID-19>.
- [14] C. Mauger, C. MacDonald, Michigan's COVID-19 cases, deaths hit blacks disproportionately, The Detroit News [Internet], 2020 Apr 2, Available from: <https://www.detroitnews.com/story/news/local/michigan/2020/04/02/michigans-covid-19-deaths-hit-417-cases-exceed-10-700/5113221002/>.
- [15] Michigan coronavirus database, [Internet], [cited 2020 May 4]. Available from: https://www.michigan.gov/coronavirus/0,9753,7-406-98163_98173--,00.html.
- [16] M. Garcia, Chelsea, city of working Latino immigrants, emerges as a COVID-19 hotspot, Available from: <https://www.bostonglobe.com/2020/04/07/opinion/chelsea-city-working-latino-immigrant-emerges-covid-19-hotspot/> 2020 Apr 7.
- [17] N. Husain, C. Reyes, Before data showed Chicago blacks dying at higher rates, communities of color knew recovery from COVID-19 would be slow, Available from: <https://www.chicagotribune.com/coronavirus/ct-coronavirus-chicago-health-disparities-data-20200410-rf7lmmvgurfwpxiatebsowzsu-story.html#nt=oufit&nt=feed-flex-feature> 2020 Apr 10.
- [18] EG. Ellis, For Homeless People, Covid-19 Is Horror on Top of Horror, WIRED [Internet], 2020 Apr 2, Available from: <https://www.wired.com/story/coronavirus-covid-19-homeless/>.
- [19] A. Bond, As Covid-19 surges among San Francisco's homeless, doctors face difficult choices, Available from: <https://www.statnews.com/2020/04/11/coronavirus-san-francisco-homeless-doctors-difficult-choices/> 2020 Apr 11.

- [20] D. Culhane, D. Treglia, K. Steif, R. Kuhn, Estimated emergency and observational/quarantine capacity need for the US homeless population related to COVID-19 exposure by county; projected hospitalizations, intensive care units and mortality, [Internet]. Available from: http://works.bepress.com/dennis_culhane/237/ 2020.
- [21] M. Williams, B. Gelay, L. Broad, The covid-19 crisis is going to get much worse when it hits rural areas, The Washington Post [Internet], 2020 Apr 6 , Available from: <https://www.washingtonpost.com/opinions/2020/04/06/covid-19-crisis-is-going-get-much-worse-when-it-hits-rural-areas/>.
- [22] D. Silva, So many patients dying: Doctors say NYC public hospital reeling from coronavirus cases, NBC News [Internet], 2020 Mar 30 , Available from: <https://www.nbcnews.com/news/us-news/so-many-patients-dying-doctors-say-nyc-public-hospitals-reeling-n1172451>.
- [23] S. Mansoor, Data suggests many New York City neighborhoods hardest hit by COVID-19 are also low-income areas, Time , [Internet]. Available from: <https://time.com/5815820/data-new-york-low-income-neighborhoods-coronavirus/> 2020 Apr 5.
- [24] New York State Department of Health [Internet], , [cited 2020 Apr 24]. Available from: <https://covid19tracker.health.ny.gov/views/NYS-COVID19-Tracker/NYSDOHCOVID-19Tracker-Fatalities?%3Aembed=yes&%3Atoolbar=no&%3Atabs=n#/views/NYS%2dCOVID19%2dTracker/NYSDOHCOVID%2d19Tracker%2dMap?%253Aembed=yes&%253Atoolbar=no>.
- [25] Louisiana Department of Health [Internet], , [cited 2020 Apr 13]. Available from: <http://ldh.la.gov/Coronavirus>.
- [26] E. Ramos, M.I. Zamudio, In Chicago, 70% of COVID-19 Deaths Are Black, WBEZ [Internet], 2020 Apr 5 , Available from: <https://www.wbez.org/stories/in-chicago-70-of-covid-19-deaths-are-black/dd3f295f-445e-4e38-b37f-a1503782b507>.
- [27] F. Spielman, Lightfoot declares 'public health red alarm' about racial disparity in COVID-19 deaths, Available from: <https://chicago.suntimes.com/coronavirus/2020/4/6/21209848/coronavirus-covid-19-deaths-racial-disparity-life-expectancy-arwady-lightfoot> 2020 Apr 6.
- [28] Chicago Department of Public Health [Internet], , [cited 2020 Apr 25]. Available from: <https://www.chicago.gov/city/en/sites/covid-19/home/latest-data.html>.
- [29] R. Levitan, The infection that's silently killing coronavirus patients, The New York Times: Opinion [Internet], 2020 Apr 20 . Available from: <https://www.nytimes.com/2020/04/20/opinion/coronavirus-testing-pneumonia.html?auth=login-email&login=email>.
- [30] T. Winter, M. Enright, Why did so many New Yorkers with COVID-19 wait until it was too late to call an ambulance? NBC News [Internet], 2020 Apr 23 , Available from: <https://www.nbcnews.com/health/health-care/why-did-so-many-new-yorkers-covid-19-wait-until-n1190111>.
- [31] Amid ongoing COVID-19 pandemic Governor Cuomo announces statewide public-private hospital plan to fight COVID-19, New York State Online Pressroom , [Internet]. Available from: <https://www.governor.ny.gov/news/amid-ongoing-covid-19-pandemic-governor-cuomo-announces-new-hospital-network-central> 2020 Mar 30.
- [32] Bureau of Labor Statistics, Job flexibilities and work schedules — 2017–2018. Data from the American time use survey. [Internet], [cited 2020 May 4]. Available from: <https://www.bls.gov/news.release/pdf/flex2.pdf> 2019 Sep.
- [33] E. Fitzhugh, A. Florant, J. Julien, D. Pinder, S. Stewart III, J. Wright, et al., COVID-19: investing in black lives and livelihoods [Internet], [cited 2020 Apr 24]. Available from: McKinsey & Company <https://www.mckinsey.com/industries/public-sector/our-insights/covid-19-investing-in-black-lives-and-livelihoods> 2020.
- [34] C. Robertson, R. Gebeloff, How Millions of Women Became the Most Essential Workers in America, The New York Times [Internet], 2020 Apr 18 , Available from: <https://www.nytimes.com/2020/04/18/us/coronavirus-women-essential-workers.html>.
- [35] J. Margolin, FBI warns of potential surge in hate crimes against Asian Americans amid coronavirus, ABC News [Internet], 2020 Mar 27 , Available from: <https://abcnews.go.com/US/fbi-warns-potential-surge-hate-crimes-asianamericans/story?id=69831920>.
- [36] American Association of Medical Colleges, U.S. physician workforce data. Diversity in medicine: facts and figures 2019 [Internet], [cited 2020 May 5]. Available from: <https://www.aamc.org/data-reports/workforce/interactive-data/figure-18-percent-age-all-active-physicians-race/ethnicity-2018>.
- [37] H. Zia, Targeting Asians and Asian Americans will make it harder to stop covid-19, The Washington Post , [Internet]. Available from: <https://www.washingtonpost.com/opinions/2020/04/02/targeting-asians-asian-americans-will-make-it-harder-stop-covid-19/> 2020 Apr 2.
- [38] American College of Surgeons, ACS statement on discrimination [Internet], Available from <https://www.facs.org/covid-19/discrimination> 2020.
- [39] E. Basch, B.B. Reeve, S.A. Mitchell, S.B. Clauser, L.M. Minasian, A.C. Dueck, et al., Development of the National Cancer Institute's patient-reported outcomes version of the common terminology criteria for adverse events (PRO-CTCAE), J. Natl. Cancer Inst. 106 (9) (2014 Sep).
- [40] E. Basch, A.M. Deal, A.C. Dueck, H.I. Scher, M.G. Kris, C. Hudis, et al., Overall survival results of a trial assessing patient-reported outcomes for symptom monitoring during routine cancer treatment, JAMA 318 (2) (2017) 197–198 11.
- [41] S. Blank, M. Frey, What the COVID-19 crisis means for gynecologic cancer patients [Internet], Available from: <https://www.foundationforwomenscancer.org/webinar-on-covid-19-and-gyn-cancer-patients/> 2020.
- [42] Endometrial Cancer Action Network for African-Americans [Internet], , Available from <https://ecanawomen.org/>.
- [43] Gynecologic oncology considerations during the COVID-19 pandemic [Internet], [cited 2020 Apr 26]. Available from: Society of Gynecologic Oncology <https://www.sgo.org/clinical-practice/management/covid-19-resources-for-health-care-practitioners/gyn-onc-considerations-during-covid-19/> 2020.
- [44] COVID-19 patient care information. [Internet], [cited 2020 Apr 25]. Available from: American Society of Clinical Oncology <https://www.asco.org/asco-coronavirus-information/care-individuals-cancer-during-covid-19> 2020.
- [45] R. Garfield, K. Orgera, A. Damico, The Coverage Gap: Uninsured Poor Adults in States that Do Not Expand Medicaid, Kaiser Commission on Medicaid and the Uninsured, The Henry J Kaiser Family Foundation [Internet], 2020 Jan 14 , Available from: <https://www.kff.org/medicaid/issue-brief/the-coverage-gap-uninsured-poor-adults-in-states-that-do-not-expand-medicare/>.
- [46] C.M. Grogan, S. (Ethan) Park, The racial divide in State Medicaid expansions, J. Health Polit. Policy Law 42 (3) (2017 Jun) 539–572 , [Internet]. [cited 2020 Apr 25]. Available from: <https://read.dukeupress.edu/jhppl/article/42/3/539-572/13927>.
- [47] P.S. Forscher, C. Mitamura, E.L. Dix, W.T.L. Cox, P.G. Devine, Breaking the prejudice habit: mechanisms, timecourse, and longevity, J. Exp. Soc. Psychol. 72 (2017 Sep) 133–146 , [Internet]. [cited 2020 Apr 25]. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S0022103116306436>.
- [48] L.A. Penner, S. Gaertner, J.F. Dovidio, N. Hagiwara, J. Porcerelli, T. Markova, et al., A social psychological approach to improving the outcomes of racially discordant medical interactions, J. Gen. Intern. Med. 28 (9) (2013 Sep) 1143–1149 , [Internet]. [cited 2020 Apr 25]. Available from: <http://link.springer.com/10.1007/s11606-013-2339-y>.